

REMARKS

This amendment is submitted in response to the outstanding Official Action mailed July 30, 2004. In view of the above claim amendments and the remarks which follow, reconsideration and allowance of this application is respectfully requested.

Claim 6 has been amended to recite that at least one of the source of calcium ions, source of magnesium ions, source of phosphate ions and source of hydroxide ions is water-insoluble or forms a water-insoluble apatite precursor, and that the ion sources are stoichiometrically selected to provide a level of magnesium substitution in the hydroxyapatite lattice structure between about 2.0 and about 29 wt%. It is evident from the specification that these are the ion sources referred to that at least one of which is water-insoluble. It is also evident from the specification that the level of magnesium substitution referred to is the level in the hydroxyapatite lattice structure. The amendments to Claim 6 therefore do not introduce new matter.

Claim 29 has been amended to delete language directed to the magnesium content of the lattice structure being increased relative to lattice calcium. Claim 29 is now directed to a method in which the magnesium content of the lattice structure is increased relative to non-lattice magnesium. This is disclosed in the paragraph bridging pages 8 and 9 of the specification and also does not introduce new matter.

For reasons which are submitted below, the claims in their present form are in condition for allowance. Accordingly, reconsideration is respectfully requested.

Turning to the Official Action, claims 6, 8 – 11 and 13 – 20 were rejected under 35 U.S.C. §112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter that applicants regard as the invention. The examiner stated that Claim 6 recited at least one insoluble ion, but did not require calcium, phosphorus, magnesium or hydroxide as that ion, and also that the claim language did not clearly indicate

that the level of magnesium is that of the hydroxyapatite, as opposed to free magnesium ions in the hydroxyapatite. This rejection is respectfully traversed in view of the above claim amendments for the reasons set forth hereinafter.

Claim 6 has been amended to clarify that at least one of the source of calcium ions, source of magnesium ions, source of phosphate ions and source of hydroxide ions is water-insoluble or forms a water-insoluble apatite precursor, and that the level of magnesium substitution in the hydroxyapatite lattice structure is between about 2.0 and about 29 wt%. The identity of the water-insoluble ion source and the level of magnesium substitution in the hydroxyapatite structure is now unambiguous. By amending Claim 6 in this manner, this rejection under 35 U.S.C. § 112, second paragraph has thus been overcome. Reconsideration by the Examiner and withdrawal of this rejection is therefore respectfully requested.

Next, Claim 29 was rejected under 35 U.S.C. § 112, first paragraph for failing to comply with the written description requirement. It is the Examiner's position that the applicants were not in possession of the subject matter of claim 29 beyond its application to the method of claim 6. This rejection is respectfully traversed in view of the above claim amendment for the reasons set forth hereinafter.

Claim 29 has been amended to delete language directed to the magnesium content of the lattice structure being increased relative to lattice calcium and is now directed to a method in which the magnesium content of the lattice structure is increased relative to non-lattice magnesium. As explained in the paragraph bridging pages 8 and 9, what applicants have discovered, which is conveyed by applicant's description, is that aqueous ammonium citrate will preferentially dissolve non-lattice magnesium ions and leave behind magnesium atoms that have been incorporated into the hydroxyapatite lattice structure.

One of ordinary skill in the art understands from the specification that the method of Claim 29 will function to preferentially dissolve non-lattice magnesium ions and leave behind magnesium atoms for any magnesium-substituted hydroxyapatite, and not just those

compounds made by the method of Claim 6. To limit Claim 29 to only those magnesium-substituted hydroxyapatites prepared by the method of Claim 6 would unnecessarily narrow the claims, permitting the practice of Applicants' inventive contribution in a non-infringing manner when Applicants' have disclosed a method clearly applicable to any magnesium-substituted hydroxyapatite containing unreacted magnesium ions.

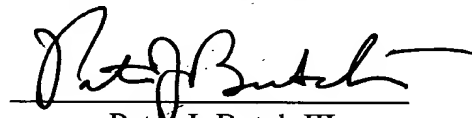
By amending Claim 29 to clarify that the washing step does not affect lattice magnesium content relative to lattice calcium content so that the claim is now directed to increasing the magnesium content of the lattice structure relative to non-lattice magnesium, this claim is now commensurate in scope with the invention described in the specification as being possessed by Applicants at the time the Application was filed. Claim 29 being amended in this manner, thus overcomes this rejection under 35 U.S.C. § 112, second paragraph. Reconsideration by the Examiner and withdrawal of this rejection is therefore respectfully requested.

Accordingly, in view of the above claim amendments and the foregoing remarks, this application is now in condition for allowance. Reconsideration is respectfully requested.

The Examiner is requested to telephone the undersigned if it is believed that there are any remaining issues in this application to be resolved. Finally, if there are any additional charges in connection with this response, the Examiner is authorized to charge Applicants' Deposit Account No. 19-5425 therefor.

Dated January 31, 2005

Respectfully submitted,



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